

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of removing substances from a cell extract that bind an affinity support but do not contribute to protein synthesis producing a cell extract for cell-free protein synthesis, comprising:

- a) providing a cell extract capable of synthesis of a protein and an affinity support capable of binding to the protein, and
- b) the step of contacting a the cell extract prior to synthesis of the protein having a protein synthetic activity with an the affinity support having an affinity to a protein to be synthesized using the extract, and and thereby removing substances bound to the affinity support from the cell extract, and

wherein

the affinity support removal of substances bound to the affinity support does not impair the protein synthetic activity of the cell extract when the affinity support is contacted with the cell extract.

2. (Original) The method according to claim 1, wherein the cell extract is a wheat germ extract.

3. (Cancelled)

4. (Previously presented) The method according to claim 1, wherein the affinity support is a metal ion immobilized support.

5. (Original) The method according to claim 4, wherein the metal ion immobilized support is a cobalt immobilized support, a nickel immobilized support, or a zinc immobilized support.

6-7. (Cancelled)

8. (Currently amended) A method of producing synthesizing a protein, comprising:

- a) providing a cell extract capable of synthesis of a protein and an affinity support capable of binding to the protein,
- b) contacting the cell extract prior to synthesis of the protein with the affinity support and thereby removing substances bound to the affinity support from the cell extract,
- c) removing the affinity support with the substances bound thereto from the cell extract, and
- d) synthesizing a ~~the~~ protein by using ~~contacting the~~ a ~~cell extract for cell-free protein synthesis produced by the method of claim 1 and mRNA.~~

9. (Currently amended) A method of purifying a protein, comprising:

- a) providing a cell extract capable of synthesis of a protein and a first affinity support capable of binding to the protein,
- b) contacting the cell extract prior to synthesis of the protein with the first affinity support and thereby removing substances bound to the first affinity support from the cell extract,
- c) removing the first affinity support with the substances bound thereto from the cell extract,
- d) synthesizing the protein by contacting the cell extract and mRNA,
- e) contacting the cell extract with a second affinity support substantially the same as the first affinity support and thereby binding the protein, and
- f) eluting the protein from the second affinity support and thereby purifying the protein performing protein synthesis reaction by using a cell extract for cell-free protein synthesis produced by the method of claim 1; and
— contacting the obtained synthesis reaction solution with an affinity support used in the production of the cell extract or with an affinity support which is substantially the same as the affinity support to allow the protein to bind to the affinity support, to thereby collect the protein.

10-11. (Cancelled)

12. (Previously presented) The method according to claim 2, wherein the affinity support is a metal ion immobilized support.

13-20. (Cancelled)

21. (New) The method according to claim 12, wherein the metal ion immobilized support is a cobalt immobilized support, a nickel immobilized support, or a zinc immobilized support.

22. (New) The method according to claim 1, wherein the affinity support is a glutathione immobilized support.

23. (New) The method according to claim 2, wherein the affinity support is a glutathione immobilized support.

24. (New) The method according to claim 8, wherein the cell extract is a wheat germ extract.

25. (New) The method according to claim 8, wherein the affinity support is a metal ion immobilized support.

26. (New) The method according to claim 25, wherein the metal ion immobilized support is a cobalt immobilized support, a nickel immobilized support, or a zinc immobilized support.

27. (New) The method according to claim 8, wherein the affinity support is a glutathione immobilized support.

28. (New) The method according to claim 9, wherein the cell extract is a wheat germ extract.

29. (New) The method according to claim 9, wherein the first and second affinity supports are metal ion immobilized supports.

30. (New) The method according to claim 29, wherein the metal ion immobilized supports are cobalt immobilized supports, nickel immobilized supports, or zinc immobilized supports.

31. (New) The method according to claim 9, wherein the affinity supports are glutathione immobilized supports.